



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,743	03/08/2001	John McCormack	EDGE001/01US	5719

7590 10/04/2005

GLENN PATENT GROUP
3475 Edison Way
Suite L
Menlo Park, CA 94025

EXAMINER

MATTIS, JASON E

ART UNIT PAPER NUMBER

2665

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,743

Applicant(s)

MCCORMACK ET AL.

Examiner

Jason E. Mattis

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005 and 13 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to both the amendment filed on 2/2/05 and the response to restriction filed on 7/13/05. Group I, comprising claims 1-10 and 13-14, has been elected. Due to the amendment, previous objections to the specification and claims have been withdrawn. Claims 1-10 and 13-14 are currently pending in the application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 8, and 13-14, are rejected under 35 U.S.C. 102(e) as being anticipated by Wu (U.S. Pat. 6665301).

With respect to claim 1, Wu discloses a method for Internet telephony (See column 5 lines 61-65, column 3 lines 25-40, and Figure 1 of Wu for reference to a telecommunications system 10 transferring data for real time applications such as voice-over IP transmissions). Wu also discloses connecting a first telephone to a

first switch using a first virtual circuit (**See column 4 lines 10-39 and Figure 1 of Wu for reference to a virtual channel 40, a first virtual circuit, being formed in the transmission line 28 between Node A and Node B, a first switch, in the VoIP network 10, meaning a VoIP phone is connected through Node A to Node B**). Wu further discloses connecting a second telephone to a second switch using a second virtual circuit (**See column 4 lines 10-39 and Figure 1 of Wu for reference to a virtual channel 44, a second virtual circuit, forming a connection between Node D and Node C, a second switch, in the VoIP network 10, meaning a VoIP phone is connected through Node D to Node C**). Wu also discloses connecting the first switch to the second switch using a third virtual circuit (**See column 4 lines 10-39 and Figure 1 of Wu for reference to virtual channel 48, a third virtual circuit, connecting nodes B and C through a public ATM network**). Wu further discloses that the first, second and third virtual circuit are managed independently as part of separate networks (**See column 4 lines 10-39 and Figure 1 of Wu for reference to virtual channels 40, 44, and 48 each being set up independently with virtual circuit 40 being a part of private network 22, virtual circuit 48 being a part of private network 24, and virtual circuit 44 being part of public network 20**).

With respect to claim 2, Wu discloses receiving a data packet at the first switch from the first telephone through the first virtual circuit (**See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to an ATM cell, which is a data packet, being routed to Node 32, or Node B, through virtual circuits including virtual channel 40**). Wu also discloses routing the data packet based on a destination for the

data packet from the first switch to the second switch via the third switched virtual circuit (See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to the ATM cell being routed between Nodes 32 and 36, or Nodes B and C, through virtual circuits including virtual channel 48). Wu further discloses sending the data packet from the second switch through the second virtual circuit to the second telephone (See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to the ATM cell being routed from Node 36, or Node C, to the far end private network with a VoIP phone).

With respect to claim 3, Wu discloses that the data packet comprises voice data (See column 3 lines 27-31 of Wu for reference to transmitting voice through the telecommunications system 10).

With respect to claim 8, Wu discloses a method for connecting a plurality of edge networks that straddle at least one core network (See column 3 lines 27-40 and Figure 1 of Wu for reference to a public network 12, which is a core network, straddled by multiple private networks 14, which are edge networks). Wu also discloses setting up at least one trunk according to a first protocol across the core network irrespective of communications among the plurality of edge networks and the at least one core network (See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to setting up a virtual channel 48, which is a trunk, across the public network 12 according to ATM protocol, with the virtual channel 48 being across only the public network 20, which is the core network, irrespective of the virtual channels set up between the private networks 22 and 24, which are edge

networks, and the public network 20). Wu further discloses receiving data from at least a first edge network via a first multiprotocol convergence switch associated with the first edge network **(See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to routing ATM cells, which contain data, between Node 30, a first multiprotocol convergence switch, of the private network 14 and Node 32 of the public network 12, or Nodes A and B, using virtual channel 40).** Wu also discloses transmitting the data from the first multiprotocol convergence switch to at least a second multiprotocol convergence switch associated with the second edge network via the trunk **(See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to routing ATM cells between Node 30 of a first private network and Node 38, a second multiprotocol convergence switch, of a second private network, using virtual channel 48).**

With respect to claim 13, Wu discloses a method for transmitting a packet through an electronic network **(See column 3 line 57 to column 4 line 9 and Figure 1 of Wu for reference to transmitting ATM cells, which are packets, through telecommunications system 10, which is an electronic network).** Wu also discloses setting up on a core network a plurality of switched virtual paths irrespective of communications between the associated edge ATM switch and the core network **(See column 3 line 57 to column 4 line 9 and Figure 1 of Wu for reference to setting up virtual paths through telecommunications system 10, including public network 12, which is a core network, with the virtual channel 48 being across only the public network 20, which is the core network, irrespective of the virtual channels**

Art Unit: 2665

set up between the private networks 22 and 24, which are edge networks, and the public network 20). Wu further discloses associated edge ATM switches **(See column 3 line 57 to column 4 line 9 and Figure 1 of Wu for reference to Nodes 32 and 36, or Nodes B and C, which are edge ATM switches of the public network 12 and for reference to Nodes 30 and 38, or Nodes A and D, which are edge ATM switches of separate private networks 14).** Wu also discloses each virtual path comprising at least one switched virtual circuit and each virtual circuit comprising at least one channel **(See column 3 line 57 to column 4 line 9 and Figure 1 of Wu for reference to virtual paths having virtual channels, which are virtual circuits, and for reference to virtual channels being the physical connections in the network meaning they comprise at least one channel).** Wu further discloses assigning a respective virtual path identification number to each switched virtual path and a respective virtual circuit identification number to each switch virtual circuit and identifying a packet with a switched virtual path identification number and with a switched virtual circuit identification number **(See column 3 line 57 to column 4 line 9 and Figure 1 of Wu for reference to ATM cells using switching labels, which are identification numbers, that define a virtual path and a virtual channel, with the ATM cells being identified by the switching labels).** Wu also discloses transmitting the packet to the associated edge ATM switch using the switched virtual path having the same virtual path identification number as the packet and the switched virtual circuit having the same virtual identification number as the packet **(See column 3 line 57 to column 4 line 39**

and Figure 1 of Wu for reference to transmitting an ATM cell from Node A to Node B using virtual channel 40 as identified by the switching label of the ATM cell).

With respect to claim 14, Wu discloses setting up on the edge network at least one internal switched virtual path (See Figure 1 of Wu for reference to the leftmost private network 14 having internal virtual channel connections 56, which are part of a virtual path connection, as an input to edge Node A). Wu also discloses routing the packet through the edge network using the internal switched virtual path (See column 4 lines 10-39 and Figure 1 of Wu for reference to transmitting ATM cells through virtual channel connections 56 to edge Node A where the cells may be further transmitted through virtual tunnel 50).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Yang (U.S. Application 10/706730).

With respect to claim 4, Wu does not disclose stripping the header from the data packet prior to routing and then routing the stripped data packet to the second switch.

With respect to claim 5, Wu does not disclose adding a header to the stripped data packet subsequent to receiving the data packet at the second switch prior to sending the packet to the second telephone.

With respect to claim 10, Wu does not disclose stripping the head portion from the data prior to routing a data packet and adding a replacement header to the data subsequent to receiving the data.

With respect to claims 4-5 and 10, Yang, in the field of communications, discloses a network that strips off RTP/UDP/IP headers from packets before transferring them over an ATM network (See page 4 paragraph 90 to page 5 paragraph 103 and Figure 4B of Yang for reference to forming compressing a packet by completely removing IP/UDP/RTP headers before sending a packet over an ATM network and routing the packet to an ATM egress switch). Yang also discloses adding IP/UDP/RTP headers back onto a packet after a packet has been received at an egress of an ATM network and before sending the packet to an IP network (See page 5 paragraphs 107-108 and Figure 4B of Yang for reference to decompressing a packet by adding an IP/UDP/RTP header on the packet after it is received at an edge switch to an IP network). Stripping a header before sending it over an ATM network and adding it back on at an egress switch of an ATM network has the advantage of providing a higher compressing gain while saving resources, as

suggested by Yang (**See page 2 paragraph 49 of Yang for reference to this advantage**).

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Yang, to stripping a header before sending it over an ATM network and adding it back on at an egress switch, as suggested by Yang, with the Internet telephony method, system, and switches of Wu, with the motivation being to provide a higher compressing gain while saving resources.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Roy.

With respect to claim 6, Wu does not disclose converting telephone call data between an IP network an AAL2 network prior to routing the data packet.

With respect to claim 6, Roy, in the field of communications, discloses converting telephone call data between an IP network and an AAL2 network (**See column 9 line 59 to column 10 line 51 of Roy for reference to converting IP data into ATM cells using ATM adaptation layer protocol before transferring the data**). Converting data between an IP network and an AAL2 network has the advantage of allowing telephone data to travel from an IP network to an ATM network, which is more like a circuit switched network, to provide a better quality of service for the real time telephone call data.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Roy, to combine converting data between an

IP network and an AAL2 network, as suggested by Roy, with the Internet telephony method of Wu, with the motivation being to allow allowing telephone data to travel from an IP network to an ATM network, which is more like a circuit switched network, to provide a better quality of service for the real time telephone call data.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Frey et al. (U.S. Pat. 5982783).

With respect to claim 7, Wu does not disclose converting the data packet between an AAL5 network and an AAL2 network prior to routing the data packet.

With respect to claim 7, Frey et al., in the field of communications, discloses converting data between an AAL5 network and an AAL2 network (**See column 5 line 1 to column 6 line 4 and column 9 lines 3-41 and Figure 3 of Frey et al. for reference to transferring data packets between both AAL2 and AAL5 networks as dictated by call processing**). Converting data between an AAL5 network and an AAL2 network has the advantage of allowing packets to be converted to an AAL2 network which provides better quality of services for connection-oriented, variable bit-rate, timing-sensitive applications, such as video and audio or voice, than an AAL5 network that supports time-insensitive traffic (**See column 5 line 62 to column 6 line 3 for reference to this advantage**).

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Frey et al., to combine converting data between both AAL2 and AAL5 networks, as suggested by Frey et al., with the Internet

telephony method of Wu, with the motivation being to allow packets to be converted to an AAL2 network which provides better quality of services for connection-oriented, variable bit-rate, timing-sensitive applications, such as video and audio or voice, than an AAL5 network that supports time-insensitive traffic.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Roy as applied to claim 6 above, and further in view of Frey et al.

With respect to claim 9, Roy discloses transferring data between edge networks using TCP/UDP/IP and edge networks using ATM adaptation layer protocols **(See column 9 line 59 to column 10 line 51 of Roy for reference to converting IP network data into ATM cells using ATM adaptation layer protocol before transferring the data)**. The combination of Wu and Roy does not specifically disclose that data is transferred between both AAL2 and AAL5 ATM edge networks.

With respect to claim 9, Frey et al., in the field of communications, discloses converting data between an AAL5 network and an AAL2 network **(See column 5 line 1 to column 6 line 4 and column 9 lines 3-41 and Figure 3 of Frey et al. for reference to transferring data packets between both AAL2 and AAL5 networks as dictated by call processing)**. Converting data between an AAL5 network and an AAL2 network has the advantage of allowing packets to be converted to an AAL2 network which provides better quality of services for connection-oriented, variable bit-rate, timing-sensitive applications, such as video and audio or voice, than an AAL5 network that

supports time-insensitive traffic (**See column 5 line 62 to column 6 line 3 for reference to this advantage**).

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Frey et al., to combine converting data between both AAL2 and AAL5 networks, as suggested by Frey et al., with the Internet telephony method of Wu, with the motivation being to allow packets to be converted to an AAL2 network which provides better quality of services for connection-oriented, variable bit-rate, timing-sensitive applications, such as video and audio or voice, than an AAL5 network that supports time-insensitive traffic.

Response to Arguments

2. Applicant's arguments filed 2/2/05 have been fully considered but they are not persuasive.

In response to Applicant's argument that:

"Wu is only concerned with a standard ATM network that sets up virtual circuits between each ATM switch to create an end-to-end virtual tunnel, which only exists for the lifetime of a call and then is torn down. There is no teaching or suggestion of any cited limitations above." (See page 10 of Applicant's Remarks section)

the Examiner respectfully disagrees. As shown in the rejections above, Wu discloses setting up separate, independent virtual connections to connect a call. The virtual

connections set up include two edge network connections that connect a calling node from private networks to a core public network and further include public network connections that connect the edge nodes of the core network together (See column 4 lines 10-39 and Figure 1 of Wu). These virtual connections are separate and independent connections as claimed. Therefore, Wu does disclose all the limitations of independent claims 1 and 8.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

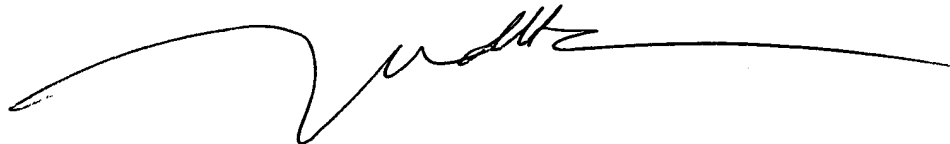
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jem

A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal line extending to the right.

**HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**